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(Original Signature of Member)

110TH CONGRESS  
1ST SESSION

**H. R.** \_\_\_\_\_

To establish research, development, demonstration, and commercial  
application programs for marine renewable energy technologies.

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IN THE HOUSE OF REPRESENTATIVES

Ms. HOOLEY introduced the following bill; which was referred to the  
Committee on \_\_\_\_\_

\_\_\_\_\_  
**A BILL**

To establish research, development, demonstration, and com-  
mercial application programs for marine renewable en-  
ergy technologies.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Marine Renewable En-  
5       ergy Research and Development Act of 2007”.

6       **SEC. 2. FINDINGS.**

7       The Congress finds the following:

1           (1) The United States has a critical national in-  
2           terest in developing clean, domestic, renewable  
3           sources of energy in order to reduce other environ-  
4           mental impacts of energy production, increase na-  
5           tional security, improve public health, and bolster  
6           economic stability.

7           (2) Marine renewable energy is a nonpolluting  
8           energy resource.

9           (3) Marine renewable energy may serve as an  
10          alternative to fossil fuels and create thousands of  
11          new jobs within the United States.

12          (4) Europe has already successfully delivered  
13          electricity to the grid through the deployment of  
14          wave and tidal energy devices off the coast of Scot-  
15          land.

16          (5) Recent studies from the Electric Power Re-  
17          search Institute, in conjunction with the Department  
18          of Energy's National Renewable Energy Laboratory,  
19          have identified an abundance of viable sites within  
20          the United States with ample wave, tidal, and ther-  
21          mal resources to be harnessed by marine power tech-  
22          nologies.

23          (6) Sustained and expanded research, develop-  
24          ment, demonstration, and commercial application  
25          programs are needed to locate and characterize ma-

1       rine renewable energy resources, and to develop the  
2       technologies that will enable their widespread com-  
3       mercial development.

4           (7) Federal support is critical to reduce the fi-  
5       nancial risk associated with developing new marine  
6       renewable energy technologies, thereby encouraging  
7       the private sector investment necessary to make ma-  
8       rine renewable energy resources commercially viable  
9       as a source of electric power and for other applica-  
10      tions.

11 **SEC. 3. DEFINITIONS.**

12       For purposes of this Act—

13           (1) MARINE RENEWABLE ENERGY.—The term  
14       “Marine Renewable Energy” means energy derived  
15       from one or more of the following sources:

16           (A) Waves.

17           (B) Tidal flows.

18           (C) Ocean currents.

19           (D) Ocean thermal energy conversion.

20           (2) SECRETARY.—The term “Secretary” means  
21       the Secretary of Energy.

22 **SEC. 4. MARINE RENEWABLE ENERGY RESEARCH AND DE-**  
23 **VELOPMENT.**

24       The Secretary shall support programs of research,  
25       development, demonstration, and commercial application

1 to expand the use of marine renewable energy production  
2 from marine renewable energy technology systems, includ-  
3 ing programs to——

4 (1) explore and compare existing marine renew-  
5 able energy extraction technologies;

6 (2) research, develop, and demonstrate ad-  
7 vanced marine renewable energy systems and tech-  
8 nologies;

9 (3) reduce the manufacturing and operation  
10 costs of marine renewable energy technologies;

11 (4) investigate efficient and reliable integration  
12 with the utility grid and intermittency issues;

13 (5) advance wave forecasting technologies;

14 (6) conduct experimental and numerical mod-  
15 eling for device and marine energy conversion device  
16 array optimization;

17 (7) increase the reliability and survivability of  
18 marine renewable energy facilities;

19 (8) study the compatibility with the environ-  
20 ment of marine renewable energy technologies and  
21 systems;

22 (9) establish protocols for how the ocean com-  
23 munity best interacts with marine renewable energy  
24 devices and parks;

1           (10) develop marine renewable energy power  
2           measurement and identification standards; and

3           (11) address standards development, dem-  
4           onstration, and technology transfer for advanced  
5           systems engineering and system integration methods  
6           to identify critical interfaces.

7   **SEC. 5. NATIONAL MARINE RENEWABLE ENERGY RE-**  
8                   **SEARCH, DEVELOPMENT, AND DEMONSTRA-**  
9                   **TION CENTERS.**

10       (a) CENTERS.—The Secretary, acting through the  
11       National Renewable Energy Laboratory, shall award  
12       grants to institutions of higher education (or consortia  
13       thereof) for the establishment of 1 or more National Ma-  
14       rine Renewable Energy Research, Development, and Dem-  
15       onstration Centers. In selecting locations for Centers, the  
16       Secretary shall choose at least 1 site from among sites  
17       that host an existing marine renewable energy research  
18       and development program in coordination with a public  
19       university engineering program.

20       (b) PURPOSES.—The Centers shall advance research,  
21       development, demonstration, and commercial application  
22       of marine renewable energy through a number of initia-  
23       tives including for the purposes described in section 4(1)  
24       through (11), and shall serve as an information clearing-  
25       house for the marine renewable energy industry, collecting

1 and disseminating information on best practices in all  
2 areas related to developing and managing enhanced ma-  
3 rine renewable energy systems resources.

4 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

5       There are authorized to be appropriated to the Sec-  
6 retary to carry out this Act \$50,000,000 for each of the  
7 fiscal years 2008 through 2012.